<u>REMARKS</u>

The Applicant has filed the present Response in reply to the outstanding Official Action of September 2, 2003, and the Applicant believes the Response to be fully responsive to the Official Action for reasons set forth below in greater detail. Applicant respectfully requests the Examiner to reconsider the present application in light of the present amendment and response.

In the present Official Action, the Examiner rejected Claims 1 and 3 pursuant to 35 U.S.C. §103(a) as being unpatentable over Satoh et al. (U.S. Patent No. 6,175,639) (hereinafter "Satoh") in view of Kim et al. (hereinafter "Kim"). The Examiner asserts that a hypothetically Satoh-Kim combined system for inserting an electronic watermark data discloses the claimed invention. More specifically, the Examiner contends that Satoh discloses a DCT converter for extracting a block of k X k pixels from an original image, quantizing DCT coefficients output from the DCT converter, inserting a proper watermark depending on the picture type and detecting the picture type. The Examiner also contends that Kim discloses deciding the magnitude of a movement based on a generation amount from the DCT converter, storing two groups of coefficient values depending on the movement, deciding the magnitude of a movement by obtaining a difference between a DCT coefficient of a front frame and a DCT coefficient of a rear frame and inserting the watermark data with a suitable strength according to the magnitude of the movement.

The Examiner therefore asserts that it would have been obvious to one of ordinary skill in the art to insert the decision method or system of Kim into the

system of Satoh to vary the watermark value based on both movement and picture type.

We respectfully disagree with the Examiner's contentions and traverse the rejections with at least the following analysis.

Claim 1 of the present application recites, <u>inter alia</u>, a system for inserting an electronic watermark data comprising, a movement decision means for deciding the magnitude of movement based on a generation amount from a DCT converter, an electronic watermark table for storing first to j-th electronic watermark data, each of said first to j-th electronic watermark data having two values depending on the magnitude of a movement based on a generation amount from the DCT converter, an inserter means for inserting watermark data according to the picture type and the movement, *whereby the magnitude of movement is decided by obtaining a difference between a DCT coefficient of a front frame and a DCT coefficient of a rear frame.* While Kim suggests that the strength of an inserted watermark can be varied or determined based upon movement, Kim fails to teach or suggest determining the magnitude of movement based on the DCT coefficient of a front frame and a DCT coefficient of the rear frame. Second, Kim fails to teach or suggest a electronic watermark data table having two values for each watermark (also for each picture type) depending on the magnitude of a movement, one value corresponding to low movement and the other corresponding to high movement, when the movement value is compared with a threshold value. Therefore, the hypothetically combined watermark inserting system of Satoh and Kim does not

teach or suggest all of the claim limitations.

With respect to Claim 3, Kim fails to teach or suggest an electronic watermark data table having two values for each watermark (also for each picture type) depending on the magnitude of a movement, one value corresponding to low movement and the other corresponding to high movement, when the movement value is compared with a threshold value. Therefore, the hypothetically combined Satoh and Kim system fails to teach or suggest all of the claim limitations.

The Examiner also rejected Claim 2 under 35 U.S.C. §103(a) as being unpatentable over Florencio et al. (U.S. Patent No. 6,208,745) (hereinafter "Florencio") in view of Kim.

The Examiner asserts that Florencio teaches inserting and selecting watermark data based on a detected picture type, and therefore teaches a multiplier for subjecting said original electronic watermark data to multiplication data according to said picture type. The Examiner further contends that Kim teaches inserting and selecting watermark data depending on a movement decision and therefore a second multiplier for subjecting said selected watermark data to multiplication according to the magnitude of a movement obtained based on the difference between said DCT coefficients. The Examiner asserts that it would have been obvious to one of ordinary skill in the art to combine the selecting of watermark data depending on a movement decision disclosed in Kim with watermark data inserting system of Florencio.

We respectfully traverse the Examiner's rejection of Claim 2 based on

the above-identified analysis regarding Claim 1; Florencio does not remove any of the above-noted deficiencies with respect to the Kim reference. Specifically, Kim fails to teach determining the magnitude of movement based on the DCT coefficient of a front frame and a DCT coefficient of the rear frame and a electronic watermark data table having two values for each watermark (also for each picture type) depending on the magnitude of a movement, one value corresponding to low movement and the other corresponding to high movement, when the movement value is compared with a threshold value. Thus, the hypothetically combined system of Florencio and Kim does not teach or suggest all of the limitations of Claim 2.

The Examiner also rejected Claims 4-6 under 35 U.S.C. § 103(a) as being unpatentable over Florencio in view of Kim and in further view of Satoh.

With respect to Claim 4, the Examiner contends that Florencio discloses a Huffman encoder for encoding data after insertion of the electronic watermark data and that in view of the Examiner's arguments with respect to Claim 1 all of the claim limitations are taught by the combined references. Once again, Applicant submits that Claim 4 is patentable distinct from the hypothetically combined system for the reasons set forth above regarding Claims 1 and 2.

With respect to Claim 5, the Examiner contends that Satoh teaches an inverse quantizer for inverse-quantizing a block of k X k pixels in which the electronic watermark data is inserted and an IDCT converter for performing an IDCT. The Examiner therefore rejected Claim 5 for the same reasoning as he had applied to Claim 2 in addition to the above contention regarding Satoh. Applicant

respectfully traverses the Examiner's rejection of Claim 5 for the same reasoning as used in Applicant's remarks regarding Claim 2. Specifically, Kim fails to teach deciding the magnitude of a movement based on a generation amount from the DCT converter, an electronic watermark data table having two values for each watermark (also for each picture type) depending on the magnitude of a movement, one value corresponding to low movement and the other corresponding to high movement, when the movement value is compared with a threshold value. Thus, the hypothetical combination of Florencio, Kim and Satoh fails to teach or suggest all of the claim limitations of Claims 4-6.

The Examiner also objected to the specification because it contains informalities. The specification has been amended herewith to obviate the Examiner's objections. Furthermore, the Examiner's objection to Figure 3 has been obviated by the attached spelling correction to Figure 3.

Lastly, the Examiner rejected Claims 1, 3-4, 6 and 7 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Specifically, with regards to Claims 1 and 3-4 the Examiner stated that "an electronic watermark data table for storing first to j-th electronic watermark data and electronic water data of (j*2) types having said movement, for each picture type" is not clearly understood. The claims have been amended to clarify the invention. The claim limitation has been amended to read as follows --each of said first to j-th electronic watermark data having two values depending on the magnitude of a movement, one

value corresponding to low movement and the other corresponding to high movement, when the movement value is compared with a threshold value and said movement is based on a generation amount from said DCT converter--. See Amended Claims 1, 3-4.

Claim 6 has also been amended to provide antecedent basis for "said multiplication coefficient". Amended Claim 6 recites, "[t]he apparatus for inserting an electronic watermark data defined in Claim 5, wherein said first multiplier and said second multiplier are omitted when a multiplication coefficient is 1. No new matter has been added by the aforementioned claim amendments.

Claim 7 has been cancelled herewith without prejudice to any reintroduction of the subject matter of the claim in this or any latter related application.

In view of the foregoing, the Applicant respectfully requests the Examiner to withdraw the rejections of Claims 1- 6 pursuant to 35 U.S.C. §103(a) and Claims 1, 3-4, and 6 pursuant to 35 U.S.C. §112, second paragraph.

In conclusion, the Applicant believes that the above-identified application is in condition for allowance and henceforth respectfully solicits the allowance of the application. If the Examiner believes a telephone conference might expedite the allowance of this application, the Applicant respectfully requests that the

Examiner call the undersigned, Applicant's attorney, at the following telephone

number: (516) 742-4343.

Respectfully submitted,

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